UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

November 10, 2022

Ms. Jamie Coleman
Regulatory Affairs Director
Southern Nuclear Operating Company
7825 River Road, BIN 63031
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4 – NRC INTEGRATED INSPECTION REPORTS 05200025/2022005, 05200026/2022005

Dear Ms. Coleman:

On September 30, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at the Vogtle Electric Generating Plant (VEGP), Units 3 and 4. On October 18, 2022, the NRC inspectors discussed the results of this inspection with Mr. G. Chick, VEGP Units 3 and 4 Executive Vice President, and other members of your staff.

The inspection examined a sample of construction activities conducted under your Combined License (COL) as it relates to safety and compliance with the Commission's rules and regulations and with the conditions of these documents. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. This report also includes the final documentation for Unit 3 inspections, tests, analyses, and acceptance criteria (ITAAC) that were inspected prior to the issuance of the 10 CFR 52.103(g) finding on August 3, 2022, and previously documented in the 10 CFR 52.103(g) Basis Document for VEGP, Unit 3, located in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML20290A276.

Based on the results of this inspection, no findings of significance were identified. This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with Title 10 of the Code of Federal Regulations 2.390, "Public Inspections, Exemptions, Requests for Withholding." Should you have any questions concerning this letter, please contact me at 404-997-4510.

Sincerely,

Khouri, George signing on behalf
of Coovert, Nicole
on 11/10/22

Nicole Coovert, Chief
Construction Inspection Branch 1
Division of Construction Oversight

Docket Nos.: 5200025, 5200026
License Nos: NPF-91, NPF-92

Enclosure(s):
NRC Inspection Report (IR) 05200025/2022005,
05200026/2022005 w/attachment: Supplemental Information

cc w/ encl: Distribution via LISTSERV

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4 – NRC INTEGRATED INSPECTION REPORTS 05200025/2022005, 05200026/2022005 Dated November 10, 2022

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| DATE | 11/10/22 | 11/10/22 | 11/10/22 | 11/10/22 | |

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**U.S. NUCLEAR REGULATORY COMMISSION**
**Region II**

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|---|---|
| Docket Numbers: | 5200025<br>5200026 |
| License Numbers: | NPF-91<br>NPF-92 |
| Report Numbers: | 05200025/2022005<br>05200026/2022005 |
| Licensee: | Southern Nuclear Operating Company, Inc. |
| Facility: | Vogtle Unit 3 and Unit 4 |
| Location: | Waynesboro, Ga |
| Inspection Dates: | July 1, 2022 through September 30, 2022 |
| Inspectors: | G. Crespo, Senior Construction Inspector, Division of Construction Oversight (DCO)<br>Y. Diaz-Castillo, Reactor Operations Engineer, Office of Nuclear Reactor Regulation (NRR), Quality Assurance Vendor Inspection Branch<br>D. Dodson, Senior Reactor Inspector, Division of Reactor Safety, Region IV<br>T. Fredette, Reactor Operations Engineer, NRR, Vogtle Project Office<br>B. Griman, Resident Inspector, DCO<br>A. Johnson, Senior Construction Project Manager, DCO<br>M. Keefe-Forsyth, Safety Culture Project Manager, NRR, Reactor Assessment Branch<br>B. Kemker, Senior Resident Inspector, DCO<br>J. Lizardi-Barreto, Construction Inspector, DCO<br>R. Mathis, Senior Construction Inspector, DCO<br>R. Patel, Senior Construction Inspector, DCO<br>D. Terry-Ward, Construction Inspector, DCO<br>J. Vasquez, Construction Inspector, DCO<br>D. Willis, Team Leader, NRR, Office of Enforcement |
| Approved by: | Nicole Coovert, Chief<br>Construction Inspection Branch 1<br>Division of Construction Oversight |

Enclosure

## SUMMARY OF FINDINGS

Inspection Report (IR) 05200025/2022005, 05200026/2022005; 07/01/2022 through 09/30/2022; Vogtle Unit 3 and Unit 4 Combined License, integrated inspection report.

This report covers a three-month period of inspection by headquarters, regional, and resident inspectors. The NRC's program for overseeing the safe construction of commercial nuclear power reactors is described in IMC 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

### A. NRC-Identified and Self Revealed Findings

None

### B. Licensee-Identified Violations

None

## REPORT DETAILS

### Summary of Plant Construction Status

Unit 3: The licensee completed plant construction and testing necessary to satisfy all inspections, tests, analyses, and acceptance criteria (ITAAC) in Appendix C of the Unit 3 combined license (COL). The licensee made this notification to the NRC in a letter dated July 29, 2022 (ADAMS Accession No. ML22210A090). The NRC documented completion of its review of all ITAAC notifications and all ITAAC-related inspections in a letter dated August 3, 2022 (ADAMS Package Accession No. ML20290A280). The licensee worked to complete remaining construction activities and all required maintenance and surveillance tests to enter Mode 6 and load fuel in the reactor.

Unit 4: The licensee completed integrated flush and open vessel testing activities and was making preparations for closed vessel testing. The licensee continued installation of plant electrical cabinets, raceways, conduits, and cables.

### 1. CONSTRUCTION REACTOR SAFETY

**Cornerstones: Design/Engineering, Procurement/Fabrication, Construction/Installation, Inspection/Testing**

IMC 2503, Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) - Related Work Inspections

1A01 (Unit 3) ITAAC Number 3.3.00.07aa (789) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07aa (789). The inspectors used the following NRC inspection procedures (IPs)/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the containment building. The rooms inspected were the steam generator operating deck (room 11501), upper pressurizer compartment (room 11503), and lower automatic depressurization system (ADS) valve area (room 11603). The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways. The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee's corrective actions for issues entered into the corrective action program (CAP) to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1100-ITR-CTMTIR, Revision 0, SV3-1100-ITR-CTMT, Revision 0 and supporting documentation to determine if the licensee's inspection results inside containment confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables inside containment are identified by the appropriate color code.
- Class 1E electrical cables and communication cables associated with only one division were routed in raceways assigned to the same division and there were no other safety division electrical cables in a raceway assigned to a different division.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside containment.
- Where minimum separation distances were not met inside containment, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A02 (Unit 3) ITAAC Number 3.3.00.07ab (790) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07ab (790). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the non-radiologically controlled area of the auxiliary building. The rooms inspected included the following:

- 12305 - Division D I&C Penetration Room (Fire Area 1201 AF 03)
- 12105 - Division D Battery Room (Fire Area 1201 AF 03)
- 12104 - Division B Battery Room 1 (Fire Area 1201 AF 02)
- 12203 - Division C DC Equipment Room (Fire Area 1202 AF 03)
- 12207 - Division B DC Equipment Room (Fire Area 1202 AF 02)

The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways. The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee’s corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1200-ITR-AUXNRDIR, Revision 0, SV3-1200-ITR-AUXNRD, Revision 0 and supporting documentation to determine if the licensee's inspection results inside the non-radiologically controlled area of the auxiliary building confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables in the non-radiologically controlled area of the auxiliary building were identified by the appropriate color code.
- Class 1E electrical cables and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division were routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division.
- Separation between Class 1E divisions in the non-radiologically controlled area of the auxiliary building was consistent with Appendix C of the COL, Table 3.3-3.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside the non-radiologically controlled area of the auxiliary building (limited hazard areas).
- Where minimum separation distances were not met inside the non-radiologically controlled area of the auxiliary building, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A03 (Unit 3) ITAAC Number 3.3.00.07ba (792) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07ba (792). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the containment building. The rooms inspected were the steam generator operating deck (room 11501), upper pressurizer compartment (room 11503), and lower ADS valve area (room 11603). The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways.

The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee's corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1100-ITR-CTMTIR, Revision 0, SV3-1100-ITR-CTMT, Revision 0 and supporting documentation to determine if the licensee's inspection results inside containment confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables inside containment are identified by the appropriate color code.
- Class 1E electrical cables and communication cables associated with only one division were routed in raceways assigned to the same division and there were no other safety division electrical cables in a raceway assigned to a different division.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside containment.
- Where minimum separation distances were not met inside containment, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A04 (Unit 3) ITAAC Number 3.3.00.07bb (793) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07bb (793). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation

- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the non-radiologically controlled area of the auxiliary building. The rooms inspected included the following:

- 12305 - Division D I&C Penetration Room (Fire Area 1201 AF 03)
- 12105 - Division D Battery Room (Fire Area 1201 AF 03)
- 12104 - Division B Battery Room 1 (Fire Area 1201 AF 02)
- 12203 - Division C DC Equipment Room (Fire Area 1202 AF 03)
- 12207 - Division B DC Equipment Room (Fire Area 1202 AF 02)

The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways. The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee's corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1200-ITR-AUXNRDIR, Revision 0, SV3-1200-ITR-AUXNRD, Revision 0 and supporting documentation to determine if the licensee's inspection results inside the non-radiologically controlled area of the auxiliary building confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables in the non-radiologically controlled area of the auxiliary building were identified by the appropriate color code.
- Class 1E electrical cables and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division were routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division.

- Separation between Class 1E divisions in the non-radiologically controlled area of the auxiliary building was consistent with Appendix C of the COL, Table 3.3-3.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside the non-radiologically controlled area of the auxiliary building (limited hazard areas).
- Where minimum separation distances were not met inside the non-radiologically controlled area of the auxiliary building, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A05 (Unit 3) ITAAC Number 3.3.00.07c.i.a (795) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07c.i.a (795). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the non-radiologically controlled area of the auxiliary building. The rooms inspected included the following:

- 12305 - Division D I&C Penetration Room (Fire Area 1201 AF 03)
- 12105 - Division D Battery Room (Fire Area 1201 AF 03)
- 12104 - Division B Battery Room 1 (Fire Area 1201 AF 02)
- 12203 - Division C DC Equipment Room (Fire Area 1202 AF 03)
- 12207 - Division B DC Equipment Room (Fire Area 1202 AF 02)

The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways. The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee’s corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1200-ITR-AUXNRDIR, Revision 0, SV3-1200-ITR-AUXNRD, Revision 0 and supporting documentation to determine if the licensee's inspection results inside the non-radiologically controlled area of the auxiliary building confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables in the non-radiologically controlled area of the auxiliary building were identified by the appropriate color code.
- Class 1E electrical cables and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division were routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division.
- Separation between Class 1E divisions in the non-radiologically controlled area of the auxiliary building was consistent with Appendix C of the COL, Table 3.3-3.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside the non-radiologically controlled area of the auxiliary building (limited hazard areas).
- Where minimum separation distances were not met inside the non-radiologically controlled area of the auxiliary building, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A06 (Unit 3) ITAAC Number 3.3.00.07d.ii.a (800) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07d.ii.a (800). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the containment building. The rooms inspected were the steam generator operating deck (room 11501), upper pressurizer compartment (room 11503), and lower ADS valve area (room 11603). The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways.

The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee's corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1100-ITR-CTMTIR, Revision 0, SV3-1100-ITR-CTMT, Revision 0 and supporting documentation to determine if the licensee's inspection results inside containment confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables inside containment are identified by the appropriate color code.
- Class 1E electrical cables and communication cables associated with only one division were routed in raceways assigned to the same division and there were no other safety division electrical cables in a raceway assigned to a different division.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside containment.
- Where minimum separation distances were not met inside containment, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A07 (Unit 3) ITAAC Number 3.3.00.07d.ii.b (801) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07d.ii.b (801). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation

- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the non-radiologically controlled area of the auxiliary building. The rooms inspected included the following:

- 12305 - Division D I&C Penetration Room (Fire Area 1201 AF 03)
- 12105 - Division D Battery Room (Fire Area 1201 AF 03)
- 12104 - Division B Battery Room 1 (Fire Area 1201 AF 02)
- 12203 - Division C DC Equipment Room (Fire Area 1202 AF 03)
- 12207 - Division B DC Equipment Room (Fire Area 1202 AF 02)

The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways. The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee's corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1200-ITR-AUXNRDIR, Revision 0, SV3-1200-ITR-AUXNRD, Revision 0 and supporting documentation to determine if the licensee's inspection results inside the non-radiologically controlled area of the auxiliary building confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables in the non-radiologically controlled area of the auxiliary building were identified by the appropriate color code.
- Class 1E electrical cables and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division were routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division.

- Separation between Class 1E divisions in the non-radiologically controlled area of the auxiliary building was consistent with Appendix C of the COL, Table 3.3-3.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside the non-radiologically controlled area of the auxiliary building (limited hazard areas).
- Where minimum separation distances were not met inside the non-radiologically controlled area of the auxiliary building, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A08 (Unit 3) ITAAC Number 3.3.00.07d.iii.a (803) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07d.iii.a (803). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the containment building. The rooms inspected were the steam generator operating deck (room 11501), upper pressurizer compartment (room 11503), and lower ADS valve area (room 11603). The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways. The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded.

Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee's corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1100-ITR-CTMTIR, Revision 0, SV3-1100-ITR-CTMT, Revision 0 and supporting documentation to determine if the licensee's inspection results inside containment confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables inside containment are identified by the appropriate color code.
- Class 1E electrical cables and communication cables associated with only one division were routed in raceways assigned to the same division and there were no other safety division electrical cables in a raceway assigned to a different division.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside containment.
- Where minimum separation distances were not met inside containment, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A09 (Unit 3) ITAAC Number 3.3.00.07d.iii.b (804) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07d.iii.b (804). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A.02.02 - Installation Records Review

The inspectors inspected raceways inside the non-radiologically controlled area of the auxiliary building. The rooms inspected included the following:

- 12305 - Division D I&C Penetration Room (Fire Area 1201 AF 03)
- 12105 - Division D Battery Room (Fire Area 1201 AF 03)
- 12104 - Division B Battery Room 1 (Fire Area 1201 AF 02)
- 12203 - Division C DC Equipment Room (Fire Area 1202 AF 03)
- 12207 - Division B DC Equipment Room (Fire Area 1202 AF 02)

The inspectors conducted walkdowns of the raceways inside the rooms to verify separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables. During the walkdown, the inspectors verified that the raceways and cables were identified by the appropriate color code and the division cables were routed in their respective raceways. The inspectors also walked down cables installed in trays to verify that cable fill design requirements were met, as applicable.

The inspectors reviewed applicable construction specifications, installation procedures, written instructions, drawings, work packages, and quality control inspection reports to verify raceways that route Class 1E cables were installed in accordance with design requirements. The inspectors reviewed work packages, test and inspection records, and cable pull tickets to confirm the non-Class 1E cables needed to meet the ITAAC requirements of Appendix C of the COL were installed at the time of ITAAC verification.

For the raceways installed in these rooms, the inspectors verified the size, material, and style were as specified in design documents and work procedures. The inspectors verified raceway supports were located at points specified in approved instructions and that maximum distance between supports were not exceeded. Inspectors also verified fittings and clamps were installed according to work procedures. Additionally, the inspectors reviewed the licensee's corrective actions for issues entered into the CAP to verify issues were identified, evaluated, and corrected.

The inspectors reviewed ITAAC Technical Report SV3-1200-ITR-AUXNRDIR, Revision 0, SV3-1200-ITR-AUXNRD, Revision 0 and supporting documentation to determine if the licensee's inspection results inside the non-radiologically controlled area of the auxiliary building confirmed the following:

- Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables in the non-radiologically controlled area of the auxiliary building were identified by the appropriate color code.
- Class 1E electrical cables and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division were routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division.
- Separation between Class 1E divisions in the non-radiologically controlled area of the auxiliary building was consistent with Appendix C of the COL, Table 3.3-3.
- Separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables met separation requirements inside the non-radiologically controlled area of the auxiliary building (limited hazard areas).
- Where minimum separation distances were not met inside the non-radiologically controlled area of the auxiliary building, circuits were run in enclosed raceways or barriers.

b. Findings

No findings were identified.

1A10 (Unit 3) ITAAC Number 3.3.00.07d.iv.b (807) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07d.iv.b (807). The inspectors used the following NRC IP/sections to perform this inspection:

- 65001.09-02.03 - Documentation

The inspectors reviewed ITAAC Technical Report SV3-CSR-ITR-800807, Unit 3 Cable Separation Report for Analysis: ITAAC 3.3.00.07d.iv.b, Revision 2, to verify areas inside the non-radiological controlled area of the auxiliary building were analyzed, as specified in Table 3.3-6 of Appendix C of the Vogtle Unit 3 COL, for separation distances less than those required by ITAAC and not provided with enclosed raceways or barriers.

The inspectors reviewed engineering and design coordination report (E&DCR) APP-G1-GEF-850217, revision 0. This E&DCR documents the analysis requested by engineering services request (ESR) number 50144956. The ESR identified that the installation of the leaky coax cables used as part of the land mobil radio system distributed antenna system were not in compliance with the Institute of Electrical and Electronic Engineers (IEEE) 384 separation distances listed in APP-G1-V8-001 Appendix B and Appendix H. Analysis, as specified in Table 3.3-6 of Appendix C of the Vogtle Unit 3 COL for this ITAAC was required to evaluate this condition.

b. Findings

No findings were identified.

1A11 (Unit 4) ITAAC Number 2.2.01.11a.i (114) / Family 07E

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.01.11a.i (114). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.07-02.01 - General Installation
- 65001.E-02.04-Documentation
- 65001.E-02.06-Problem Identification and Resolution

The inspectors reviewed the equipment qualification reconciliation reports (EQRR) for spent fuel pool cooling system (SFS) and component cooling water system (CCS) containment isolation motor-operated valves (MOV) SFS-PL-V034 and CCS-PL-V207, respectively, to determine whether the licensee assessed work packages, design changes, and nonconformances to confirm the as-built configuration, including anchorage, were seismically bounded by the tests or type tests, as required by

Appendix C of the Unit 4 COL, and in accordance with data sheets SV4-PV11-Z0D-123 and SV4-PV11-Z0D-124 and design specification SV4-PV11-Z0-001.

The inspectors reviewed the licensee's methodology and selection of applicable work orders, data sheets, and design drawings, to determine whether the inspections and analyses demonstrated the as-built installed MOVs were bounded by tests or type tests. The inspectors reviewed the equipment qualification summary reports and equipment qualification data packages to determine whether installation restrictions were translated to the drawings and EQRRs.

The inspectors conducted a field walkdown to inspect the as-built installation of the MOVs. The inspectors verified each valve's make/model/serial number, mounting orientation, and location. The inspectors also verified the mechanical and electrical connections were bounded by the tested conditions.

The inspectors interviewed licensing personnel to determine how inspection and analysis were performed for applicable nonconformances and E&DCRs issued during fabrication, handling, installation, and testing to verify deviations were bounded by the seismically analyzed conditions.

b. Findings

No findings were identified.

1A12 (Unit 4) ITAAC Number 2.2.03.08c.iii (182) / Family 03A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.08c.iii (182). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.A- As-Built Attributes for SSCs associated with ITAAC

The inspectors performed an inspection to verify both Unit 4 core makeup tank (CMT) inlet lines from the reactor coolant system (RCS) cold legs had no downward sloping sections between the connections to the RCS and the high point of the lines as specified in Table 2.2.3-4 of Appendix C of the Vogtle Unit 4 COL. Similarly, the inspectors performed an inspection to verify the Unit 4 passive residual heat removal heat exchanger line from the RCS hot leg had no downward sloping sections between the connection to the RCS and the high point of the line as specified in Table 2.2.3-4 of Appendix C of the Vogtle Unit 4 COL. This inspection involved three piping sections consisting of seven pipe segments (i.e., three segments from the passive residual heat removal heat exchanger to RCS hot leg and two segments each for CMT A and CMT B from the RCS cold legs). The inspectors performed a walkdown of the three piping sections with the licensee, observed the licensee measure the slope of the two CMT lines, and performed independent measurements to verify the as-built piping was consistent with the as-built drawings. In addition, the inspectors reviewed quality records including the principal closure document (PCD), survey results, and as-built elevation drawings to verify the lines had no downward sloping sections between the connection to the RCS and the high point of the lines to satisfy the ITAAC.

b. Findings

No findings were identified.

1A13 (Unit 4) ITAAC Number 2.2.03.08c.vi.03 (191) / Family 06A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.08c.vi.03 (191). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.A- As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.03 - Independent Assessment/Measurement Inspection

The inspectors performed an inspection to verify the Unit 4 in-containment refueling water storage tank (IRWST) calculated volume was greater than, or equal, to 73,100 cubic feet between the tank outlet connection and the tank overflow as specified in Table 2.2.3-4 of Appendix C of the Vogtle Unit 4 COL. The inspectors reviewed approved drawings for the IRWST and its internal structures and components, reviewed the design calculation for the IRWST's volume, compared the survey results with dimensions from the drawings and the design calculation, and reviewed the licensees' determination of the IRWST's volume based on the survey results.

b. Findings

No findings were identified.

1A14 (Unit 4) ITAAC Number 2.5.01.04 (519) / Family 10F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.5.01.04 (519). The inspectors used the following NRC IP/sections to perform this inspection:

- 65001.10.02.02 – Inspection Activities

The inspectors conducted a review of SV4-DAS-ITR-800519 and APP-GW-GLR-623 to verify the design process used to develop the diverse actuation system (DAS) hardware and software during the installation phase defined the organizational responsibilities, activities, and configuration management controls for the performance of tests and inspections. Specifically, the inspectors reviewed the electrical equipment installation work package, SV4-DAS-JDW-1107744, to verify DAS and squib valve control cabinets were installed and inspected in accordance with applicable installation procedures including 26139-000-4MP-T81C-N3301.

The inspectors reviewed testing procedure B-GEN-ITPCI-002 to verify specific instructions and requirements were included for prerequisite and initial conditions, initial equipment setup, initial energization, power supply checks, current leakage checks. equipment restoration, and acceptance criteria. Westinghouse field chance notice SV4-GW-GCW-0126 was reviewed to verify the software installation process provided instructions and requirements for site specific equipment identification, supporting documentation and references, required steps and inspections to be performed to upgrade the Operating System, installing the replacement Antivirus product, installing the updated Application Software, configuring the software, and post installation verifications.

b. Findings

No findings were identified.

1A15 (Unit 4) ITAAC Number 3.3.00.07e (812) / Family 09A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.07e (812). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.01 - Physical Separation of Cables
- 65001.09-02.03 - Documentation

The inspectors reviewed the routing and separation of the Class 1E communication cables for the protection and safety monitoring system (PMS) to verify the as-built configuration met the acceptance criteria specified in the Updated Final Safety Analysis Report Section 8.3.2.4 and in accordance with the acceptance criteria of ITAAC 3.3.00.07e of Appendix C to the Vogtle Unit 4 COL.

Specifically, the inspectors reviewed cable pull tickets to determine routing methods used in the installation of interdivisional cable for the PMS voting logic. The inspectors reviewed the separation between fiber optic cables to verify if distance and fire zone separation requirements, from the different divisions, were met to maintain the integrity of the PMS voting logic for these Class 1E communication cables.

The inspectors reviewed the PCD associated with this ITAAC to verify the analysis documented the effects of fire damage or damage to any single raceway carrying PMS interconnection cables potentially defeating the PMS voting logic.

b. Findings

No findings were identified.

IMC 2504, Construction Inspection Program – Inspection of Construction and Operational Programs

1P01 Construction QA Criterion 16

- 35007-A16 - Appendix 16. Inspection of Criterion XVI – Corrective Action
- 35007-A16.04 - Inspection Requirements and Guidance
- 35007-A16.04.02 - Inspection of QA Program Implementation

a. Inspection Scope

The inspection team conducted multiple activities in order assess the Vogtle Units 3 and 4 safety conscious work environment (SCWE), as part of the annual CAP inspection. The team interviewed seventy-three individuals from across Units 3 and 4, including licensee and contractor staff for Cyber Security; ITAAC; Initial Test Program (ITP); Maintenance; Field Engineering; and Richmond County Constructors electrician groups and interviewed senior level managers across the organization. The NRC inspectors reviewed Policy 701, “Vogtle 3 and 4 Employee Concerns Program,” and Employee Concern Program (ECP) Work Instructions. The team interviewed ECP personnel to understand how the ECP is being implemented for the construction and SNC organizations at Vogtle 3 and 4. The team also interviewed US Alliance contractor personnel responsible for the 2022 SCWE survey.

Additionally, the team reviewed a sample of ECP files, work environment assessments (WEAs) from 2021 and 2022, condition reports (CRs) and technical evaluations (TEs) associated with SCWE concerns, and the Vogtle 2022 SCWE survey to determine if the licensee provided adequate resolution in accordance with the ECP policy, SCWE policy, and CAP procedure ND-AD-002, “Nuclear Development Corrective Action Program.” The team reviewed meeting minutes from the Nuclear Safety Culture Monitoring Panel meetings from the first quarter of 2022 to determine if the minutes captured the items discussed during the panel meetings and inputs were used from the monitoring panels to assess safety culture at the site.

Assessment

The NRC’s Final Safety Culture Policy Statement [U.S. Nuclear Regulatory Commission, “Final Safety Culture Policy Statement,” Federal Register, Vol. 76, No. 114, June 14, 2011, pp. 34773-34778] applies to all NRC licensees, applicants, and vendors. It defines Nuclear Safety Culture as, “the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment.” The policy statement discusses nine traits of a positive safety culture. These include, but are not limited to, leadership safety values and actions, work processes, problem identification and resolution, and an environment for raising concerns. As stated in the Final Safety Culture Policy Statement, “[a] trait, in this case, is a pattern of thinking, feeling, and behaving that emphasizes safety, particularly in goal conflict situations, e.g., production, schedule, and the cost of the effort versus safety.” Under each of the traits are subcategories referred to as the attributes of a healthy safety culture [NUREG-2165, “Safety Culture Language,” dated March 2014 ADAMS Accession No. ML14083A200].

The inspectors determined that the majority of the staff is willing to raise safety and quality concerns through multiple avenues without fear of retaliation and feel that they are empowered to stop work when they identify issues. In addition, the licensee staff stated that the incorporation of the SNC senior managers into the construction organizations to help with engagement and ownership of the construction project is viewed favorably by the staff. The NRC determined that many of the previous issues related to chilled work environment have been addressed and corrected.

The inspectors also determined that while the majority of the licensee staff indicated that they would be willing to raise safety concerns without fear of retaliation, some staff in more than one group indicated that they do not feel free to raise concerns without fear of retaliation because there is a perception that either: 1) concerns raised will not be addressed or 2) that they might be retaliated against. The NRC inspectors found that multiple groups do not have confidence in the CAP or that anything is being done about their concerns. Specifically, some expressed concern that when issues are brought up, documented, discussed, and then closed, they often get closed without real action to address the concerns. Some individuals indicated that they rarely or never receive feedback on their concerns and must seek it out. Some indicated that they never received training on how to use SNC CR process/program or how to receive feedback from the CR system. Similarly, some individuals indicated that when they bring up concerns, individuals are frequently moved to other positions after expressing concerns. Additionally, multiple groups indicated that they do not have confidence in the site's employee concerns program. There is a perception among several groups about issues with overall effectiveness of the ECP as well as confidentiality with using the program.

The inspectors noted that the licensee did have a policy for the ECP program, however, the inspectors determined that Vogtle 3 and 4 does not have a detailed procedure that delineates the requirements of the ECP to support the policy. Vogtle does have a work instruction for ECP but the instruction is not sufficiently detailed to provide specific direction to the employee concerns professionals. The specific directions not delineated include what types of concerns warranted each type of ECP actions; when a CAP should be generated from an ECP investigation; or timeliness of case closure. In addition, individuals indicated that it seems that CRs and TEs are frequently being closed to ECP files. The NRC is concerned about this because when issues (CRs/TEs) are closed to ECP files, there are no additional CAP documents tracking completion of the actions or establishing due dates to ensure that the actions are being completed timely and in accordance with CAP standards. One example the team identified is that CRs and TEs associated with the SCWE survey recommendations were all closed in the CAP and the only tool tracking outstanding actions is the ECP database. This tracking system does not contain due dates or expected completion dates. Hence, the need for and tracking of important actions may not be visible to all appropriate stakeholders and it does not appear that actions are being tracked.

The Licensee entered the results of this assessment into the CAP as CR 50148707.

b. Findings

No findings were identified.

1P02 Construction QA Criterion 16

- 35007-A16.04 - Inspection Requirements and Guidance
- 35007-A16.04.01 - Inspection of QA Implementing Documents
- 35007-A16.04.02 - Inspection of QA Program Implementation

a. Inspection Scope

The inspectors reviewed issues entered into the licensee's CAP daily to assess issues that might warrant additional follow-up inspection, to assess repetitive or long-term issues, to assess adverse performance trends, and to verify the CAP appropriately included regulatory required nonsafety-related structure system and components (SSCs). The inspectors periodically attended the licensee's CAP review meetings, held discussions with licensee and contractor personnel, and performed reviews of CAP activities during the conduct of other baseline inspection procedures. The inspectors reviewed conditions entered into the licensee's CAP to determine whether the issues were classified in accordance with the licensee's quality assurance program and CAP implementing procedures. The inspectors reviewed corrective actions associated with conditions entered into the CAP to determine whether appropriate actions to correct the issues were identified and implemented effectively, including immediate or short-term corrective actions, in accordance with the applicable quality assurance program requirements and Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion XVI. Additionally, the inspectors reviewed the corrective actions taken to determine whether they were commensurate with the significance of the associated conditions in accordance with the licensee's CAP implementing procedures. The inspectors completed reviews of CAP entry logs to verify issues from all aspects of the project, including equipment, human performance, and program issues, were being identified by the licensee and its contractors at an appropriate threshold and entered into the CAP as required by licensee's CAP implementing procedures.

b. Findings

No findings were identified.

## 4. OTHER INSPECTION RESULTS

4OA5 Other Activities

.1 IP 92702: Follow-Up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, and Orders

a. Inspection Scope

The inspectors reviewed commitments associated with two items from Confirmatory Orders (CO) Enforcement Action (EA)-18-130 and EA-18-171 (ADAMS Accession No. ML19249B612), issued to SNC Fleet Wide to include Farley, Hatch, Vogtle Units 1 and 2 (SNC-FW) and SNC Vogtle Units 3 and 4 (SNC-V) on November 20, 2019. The inspectors used the following IP sections to perform this inspection:

- 02.01 - Documentation Review
- 02.02.a - Corrective Actions

Training

Commitment 3.a): This commitment and action required within four (4) months of issuance of this confirmatory order, and until three (3) years thereafter, that SNC-FW and SNC-V will require all SNC employees who are onboarding to complete SCWE training, including training on 10 CFR 50.7, 10 CFR 52.5, 10 CFR 50.5, and 10 CFR 52.4, definition of adverse action as it appears in the RIS 2005-18, and acknowledge the SCWE policy within two (2) months of reporting to work. The inspectors reviewed the corrective actions described in TE 1058167 that onboarding employees from the time period of January 2021 to July 2022 completed the SCWE training as described and that the SNC SCWE policy was acknowledged within the specified time. The inspectors also reviewed corrective actions associated with NCV 5200025/2020012-01 and 05200026/2020012-01, Failure to Adequately Implement Requirements of CO EA-18-130 and 18-171, Commitment 3.a to determine if the corresponding actions were implemented in accordance with CAP procedure ND-AD-002.

The NRC acknowledges the potential organizational strain that may exist during the transition to operations and the importance of a SCWE. As a result, the NRC will continue to review the corrective actions associated with the three-year requirement for SNC-V. This action continues to be tracked by the licensee under TE 1058167.

Commitment 3.c): This commitment and action required that beginning no later than two (2) months of issuance of this confirmatory order, and until three (3) years thereafter, that SNC-FW and SNC-V will require all new SNC supervisors to receive SCWE training within six (6) months of their beginning work as a supervisor at SNC. For SNC-FW and SNC-V, the inspectors reviewed the corrective actions for TEs 1064351 and 1058169 that all new SNC supervisors (~120) received the training as described in the CO.

The NRC acknowledges the potential organizational strain that may exist during the transition to operations and the importance of a SCWE. As a result, the NRC will

continue to review the corrective actions associated with the three-year requirement for SNC-V. This action is being tracked by the licensee under TE 1058169.

Other Activities

Commitment 4.d): This commitment and action required within six (6) months of issuance of this order that SNC-V will obtain a third-party, independent SCWE survey of Vogtle Units 3 and 4 project sites. SNC-V will obtain a second third-party, independent SCWE survey of SNC-V no later than thirty (30) months after issuance of this confirmatory order. The results of each survey will be summarized into reports which will be made available for inspection by NRC. Recommendations (if any) from the survey reports will be entered into the CAP or ECP, as appropriate, depending on the nature of the recommendation, for disposition. The NRC reviewed the first independent SCWE survey as documented in inspection reports 05200025/2020012 and 05200026/2020012. The inspectors verified by a review of the corrective actions for TE 1062345 that the second independent SCWE survey for SNC-V was completed by a third-party vendor in May 2022.

The inspectors reviewed the corrective actions and enhancements associated with the second independent SCWE survey to verify that corrective actions were developed and appropriate to address the challenges/weaknesses identified in the assessment. SNC-V continues to track the corrective actions through the following CRs: 50139671, 50139675, and 50139678. The inspectors determined that Vogtle is implementing the requirements of 4.d in accordance with the order. As a part of the annual CAP, the NRC may follow-up with the corrective actions associated with this commitment.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

.1 Exit Meeting.

On October 18, 2022, the NRC inspectors discussed the results of this inspection with Mr. G. Chick, VEGP Units 3 and 4 Executive Vice President, and other members of your staff. Proprietary information was reviewed during the inspection period but was not included in the inspection report.

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

Licensees and Contractor Personnel

R. Beilke, SNC ITAAC Project Manager
M. Brummitt, SNC PI/CAP Project Director
C. Castell, WEC Licensing Engineer
K. Drudy, SNC ITAAC Project Manager
L. Grissom, SNC Licensing Engineer
M. Kelley, IEEE 384 ITAAC Project Manager
D. Kettering; SNC Engineering
S. Leighty, SNC Licensing Manager
J. March, SNC Compliance & Concerns Director
K. Phelps, SNC Compliance & Concerns Manager
L. Pritchett, SNC Licensing Engineer
K. Roberts, SNC ITAAC Manager
G. Scott, SNC Licensing Engineer
A. Tyson, SNC Project Manager-Technical Support

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

| Item Number | Type | Status | Description |
|---|---|---|---|
| CO EA-18-130 and EA-18-171: | | | |
| Commitment 3a. | CO | Inspected | Provide SCWE training to all onboarding non-supervisory employees within two (2) months of reporting to work (Section 4OA5) |
| Commitment 3c. | CO | Inspected | Provide SCWE training to all new SNC supervisors within six (6) months of their beginning work as a supervisor at SNC (Section 4OA5) |
| Commitment 4d. | CO | Inspected | Obtain a second third-party, independent SCWE survey of Vogtle Units 3 and 4 project sites no later than thirty (30) months after issuance of the confirmatory order (Section 4OA5) |

## LIST OF DOCUMENTS REVIEWED

**Section** 1A01
ITAAC Documents
SV3-1100-ITR-CTMTIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Containment Building, Revision 0
SV3-1100-ITR-CTMT, ITAAC Technical Report Unit 3 Cable Separation Report for the Containment Building, Revision 0

**Room 11501, Steam Generator 1 Operating Deck**
Work Packages
SV3-1151-SHW-1002279, - U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-1151-SHW-1003610, - U3 -CT -INSTALL SCHEDULED CONDUIT SUPPORTS -EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-SMS-EJW-1055233, - U3 -CT- Install SMS Junction Box (SV3-SMS-EJ-YE013), EL. 135'-3", Area 1, Room 11501, Revision 0

Drawings
APP-1150-ER-103, Conduit Layout Containment Building West Compartment El. 135'-3" – 153'-0", Revision 0

APP-1150-ER-806, Conduit Layout Sections Containment Building West Compartment El. 135'-3" – 153'-0", Revision 0

Condition Reports
CR 50113713 – Design Routed Conduit Non-Conformances – Containment EL. 135'-0" (Rooms 11500, 11501, 11502, 11503)
CR 50134408 – ITAAC Review of Unit 3, Room 11501
CR 50146208 - NRC identified electrical support nonconformance

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Room 11501
TE 60043518 - NRC identified electrical support nonconformance

Miscellaneous
Work-To-Go-Status-Report – Room 11501 & Room 11503, Dated 7/6/2022

**Room 11503, Upper Pressurizer Compartment**
Work Packages
SV3-1152-ERW-1016529, U3 Install and Label Designed Class 1E Conduits- Containment, Elev. 135'Y- Room 11503-Area 2 (1 of 4), Revision 0
SV3-1152-ERW-1016592, U3 Install and Label Designed Class 1E Conduits 1 1/2"-Containment, Elev. 135' 3"-Room 11503-Area 2 (3 of 4), Revision 0
SV3-1152-SHVV-1005367, U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 153' -AREA 2 -WP -5, Revision 0

Quality Control Inspection Records
SV3-1152-ERW-1016529 / Scope of Record: SV3-1152-ER-AZC26 – U3 Install and Label Designed Class 1E Conduits – Containment, Elev. 135'-3" – Room 11503-Area 2 (1 of 4)

Drawings
APP-1152-ER-103, Conduit Layout Containment Building Area 2 El. 176'-9" – Top Class 1E Conduits, Revision 7

Condition Reports
CR 50122549 - Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, RM.11503

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Ro Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, Room 11503

Miscellaneous
Work-To-Go-Status-Report – Room 11501 & Room 11503, Dated 7/6/2022

**Room 11603, ADS Valve Area Lower Tier**
Drawings
APP-1152-ER-101, Conduit Layout Containment Building Area 2 El. 135'-3" – 166'-0" Class 1E Conduits, Revision 11
APP-1152-ER-102, Conduit Layout Containment Building Area 2 El. 166'-0" – 176'-9" Class 1E Conduits, Revision 11

Condition Reports
CR 50112945 – Conduits 1152-ER-BXC01, BXC02 & BXC03 not per design FE Identified
CR 50114731 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50114761 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50146209 – NRC identified broken flex conduit in Unit 3 Room 11603

**Section** 1A02
ITAAC Documents
SV3-1200-ITR-AUXNRDIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0
SV3-1200-ITR-AUXNRD, ITAAC Technical Report Unit 3 Cable Separation Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

Drawings
APP-ECS-E9-040, Electrical Raceway and Cable Identification Markers, Revision 3

Condition Reports
CR 50146212, NRC Identified Roxtec Gland nonconformance in Unit 3 Room 12305
CR 50144418, NRC-Identified cables not properly secured in Roxtec glands in Unit 3 Room 12304
CR 50148476, NRC Identified - Editorial error in SV3-1200-ITR-AUXNRDIR
CR 50148760, NRC Identified: Inspection Review of ITAAC PCD SV3-1200-ITR-AUXNRD

Miscellaneous
APP-JE53-JOM-001, AP1000 Class 1E Resistance Temperature Detector N9002 Technical Manual, Revision 3

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ITAAC Documents
SV3-1100-ITR-CTMTIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Containment Building, Revision 0
SV3-1100-ITR-CTMT, ITAAC Technical Report Unit 3 Cable Separation Report for the Containment Building, Revision 0

**Room 11501, Steam Generator 1 Operating Deck**
Work Packages
SV3-1151-SHW-1002279, - U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-1151-SHW-1003610, - U3 -CT -INSTALL SCHEDULED CONDUIT SUPPORTS -EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-SMS-EJW-1055233, - U3 -CT- Install SMS Junction Box (SV3-SMS-EJ-YE013), EL. 135'-3", Area 1, Room 11501, Revision 0

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APP-1150-ER-103, Conduit Layout Containment Building West Compartment El. 135’-3” – 153’-0”, Revision 0
APP-1150-ER-806, Conduit Layout Sections Containment Building West Compartment El. 135’-3” – 153’-0”, Revision 0

Condition Reports
CR 50113713 – Design Routed Conduit Non-Conformances – Containment EL. 135’-0” (Rooms 11500, 11501, 11502, 11503)
CR 50134408 – ITAAC Review of Unit 3, Room 11501
CR 50146208 - NRC identified electrical support nonconformance

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Room 11501
TE 60043518 - NRC identified electrical support nonconformance

Miscellaneous
Work-To-Go-Status-Report – Room 11501 & Room 11503, Dated 7/6/2022

**Room 11503, Upper Pressurizer Compartment**
Work Packages
SV3-1152-ERW-1016529, U3 Install and Label Designed Class 1E Conduits- Containment, Elev. 135'Y- Room 11503-Area 2 (1 of 4), Revision 0
SV3-1152-ERW-1016592, U3 Install and Label Designed Class 1E Conduits 1 1/2"-Containment, Elev. 135' 3"-Room 11503-Area 2 (3 of 4), Revision 0
SV3-1152-SHVV-1005367, U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 153' -AREA 2 -WP -5, Revision 0

Quality Control Inspection Records
SV3-1152-ERW-1016529 / Scope of Record: SV3-1152-ER-AZC26 – U3 Install and Label Designed Class 1E Conduits – Containment, Elev. 135’-3” – Room 11503-Area 2 (1 of 4)

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APP-1152-ER-103, Conduit Layout Containment Building Area 2 El. 176'-9" – Top Class 1E Conduits, Revision 7

Condition Reports
CR 50122549 - Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, RM.11503

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Ro Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, Room 11503

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**Room 11603, ADS Valve Area Lower Tier**
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APP-1152-ER-101, Conduit Layout Containment Building Area 2 El. 135'-3" – 166'-0" Class 1E Conduits, Revision 11
APP-1152-ER-102, Conduit Layout Containment Building Area 2 El. 166'-0" – 176'-9" Class 1E Conduits, Revision 11

Condition Reports
CR 50112945 – Conduits 1152-ER-BXC01, BXC02 & BXC03 not per design FE Identified
CR 50114731 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50114761 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50146209 – NRC identified broken flex conduit in Unit 3 Room 11603

**Section** 1A04
ITAAC Documents
SV3-1200-ITR-AUXNRDIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

SV3-1200-ITR-AUXNRD, ITAAC Technical Report Unit 3 Cable Separation Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

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Condition Reports
CR 50146212, NRC Identified Roxtec Gland nonconformance in Unit 3 Room 12305
CR 50144418, NRC-Identified cables not properly secured in Roxtec glands in Unit 3 Room 12304
CR 50148476, NRC Identified - Editorial error in SV3-1200-ITR-AUXNRDIR
CR 50148760, NRC Identified: Inspection Review of ITAAC PCD SV3-1200-ITR-AUXNRD

Miscellaneous
APP-JE53-JOM-001, AP1000 Class 1E Resistance Temperature Detector N9002 Technical Manual, Revision 3

**Section** 1A05
ITAAC Documents
SV3-1200-ITR-AUXNRDIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

SV3-1200-ITR-AUXNRD, ITAAC Technical Report Unit 3 Cable Separation Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

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Condition Reports
CR 50146212, NRC Identified Roxtec Gland nonconformance in Unit 3 Room 12305
CR 50144418, NRC-Identified cables not properly secured in Roxtec glands in Unit 3 Room 12304
CR 50148476, NRC Identified - Editorial error in SV3-1200-ITR-AUXNRDIR
CR 50148760, NRC Identified: Inspection Review of ITAAC PCD SV3-1200-ITR-AUXNRD

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ITAAC Documents
SV3-1100-ITR-CTMTIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Containment Building, Revision 0

SV3-1100-ITR-CTMT, ITAAC Technical Report Unit 3 Cable Separation Report for the Containment Building, Revision 0

**Room 11501, Steam Generator 1 Operating Deck**
Work Packages
SV3-1151-SHW-1002279, - U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-1151-SHW-1003610, - U3 -CT -INSTALL SCHEDULED CONDUIT SUPPORTS -EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-SMS-EJW-1055233, - U3 -CT- Install SMS Junction Box (SV3-SMS-EJ-YE013), EL. 135'-3", Area 1, Room 11501, Revision 0

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APP-1150-ER-806, Conduit Layout Sections Containment Building West Compartment El. 135’-3” – 153’-0”, Revision 0

Condition Reports
CR 50113713 – Design Routed Conduit Non-Conformances – Containment EL. 135’-0” (Rooms 11500, 11501, 11502, 11503)
CR 50134408 – ITAAC Review of Unit 3, Room 11501
CR 50146208 - NRC identified electrical support nonconformance

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Room 11501

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Work-To-Go-Status-Report – Room 11501 & Room 11503, Dated 7/6/2022

**Room 11503, Upper Pressurizer Compartment**
Work Packages
SV3-1152-ERW-1016529, U3 Install and Label Designed Class 1E Conduits- Containment, Elev. 135'Y- Room 11503-Area 2 (1 of 4), Revision 0
SV3-1152-ERW-1016592, U3 Install and Label Designed Class 1E Conduits 1 1/2"-Containment, Elev. 135' 3"-Room 11503-Area 2 (3 of 4), Revision 0
SV3-1152-SHVV-1005367, U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 153' -AREA 2 -WP -5, Revision 0

Quality Control Inspection Records
SV3-1152-ERW-1016529 / Scope of Record: SV3-1152-ER-AZC26 – U3 Install and Label Designed Class 1E Conduits – Containment, Elev. 135’-3” – Room 11503-Area 2 (1 of 4)

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Condition Reports
CR 50122549 - Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, RM.11503

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Ro Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, Room 11503

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**Room 11603, ADS Valve Area Lower Tier**
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APP-1152-ER-102, Conduit Layout Containment Building Area 2 El. 166'-0" – 176'-9" Class 1E Conduits, Revision 11

Condition Reports
CR 50112945 – Conduits 1152-ER-BXC01, BXC02 & BXC03 not per design FE Identified
CR 50114731 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50114761 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50146209 – NRC identified broken flex conduit in Unit 3 Room 11603

**Section** 1A07
ITAAC Documents
SV3-1200-ITR-AUXNRDIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

SV3-1200-ITR-AUXNRD, ITAAC Technical Report Unit 3 Cable Separation Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

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Condition Reports
CR 50146212, NRC Identified Roxtec Gland nonconformance in Unit 3 Room 12305
CR 50144418, NRC-Identified cables not properly secured in Roxtec glands in Unit 3 Room 12304
CR 50148476, NRC Identified - Editorial error in SV3-1200-ITR-AUXNRDIR
CR 50148760, NRC Identified: Inspection Review of ITAAC PCD SV3-1200-ITR-AUXNRD

Miscellaneous
APP-JE53-JOM-001, AP1000 Class 1E Resistance Temperature Detector N9002 Technical Manual, Revision 3

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ITAAC Documents
SV3-1100-ITR-CTMTIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Containment Building, Revision 0

SV3-1100-ITR-CTMT, ITAAC Technical Report Unit 3 Cable Separation Report for the Containment Building, Revision 0

**Room 11501, Steam Generator 1 Operating Deck**
Work Packages
SV3-1151-SHW-1002279, - U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-1151-SHW-1003610, - U3 -CT -INSTALL SCHEDULED CONDUIT SUPPORTS -EL 135' -3" -ROOM 11501 -AREA 1, Revision 0
SV3-SMS-EJW-1055233, - U3 -CT- Install SMS Junction Box (SV3-SMS-EJ-YE013), EL. 135'-3", Area 1, Room 11501, Revision 0

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APP-1150-ER-806, Conduit Layout Sections Containment Building West Compartment El. 135’-3” – 153’-0”, Revision 0

Condition Reports
CR 50113713 – Design Routed Conduit Non-Conformances – Containment EL. 135’-0” (Rooms 11500, 11501, 11502, 11503)
CR 50134408 – ITAAC Review of Unit 3, Room 11501
CR 50146208 - NRC identified electrical support nonconformance

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Room 11501

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Work-To-Go-Status-Report – Room 11501 & Room 11503, Dated 7/6/2022

**Room 11503, Upper Pressurizer Compartment**
Work Packages
SV3-1152-ERW-1016529, U3 Install and Label Designed Class 1E Conduits- Containment, Elev. 135'Y- Room 11503-Area 2 (1 of 4), Revision 0
SV3-1152-ERW-1016592, U3 Install and Label Designed Class 1E Conduits 1 1/2"-Containment, Elev. 135' 3"-Room 11503-Area 2 (3 of 4), Revision 0
SV3-1152-SHVV-1005367, U3 -CT -FABRICATE SCHEDULED CONDUIT SUPPORTS - EL 153' -AREA 2 -WP -5, Revision 0

Quality Control Inspection Records
SV3-1152-ERW-1016529 / Scope of Record: SV3-1152-ER-AZC26 – U3 Install and Label Designed Class 1E Conduits – Containment, Elev. 135'-3" – Room 11503-Area 2 (1 of 4)

Drawings
APP-1152-ER-103, Conduit Layout Containment Building Area 2 El. 176'-9" – Top Class 1E Conduits, Revision 7

Condition Reports
CR 50122549 - Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, RM.11503

Technical Evaluations
TE 60039807 - ITAAC Review of Unit 3, Ro Bechtel QCE identified Nonconforming Conditions - Unit 3 Containment, Area 2, Room 11503

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**Room 11603, ADS Valve Area Lower Tier**
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APP-1152-ER-101, Conduit Layout Containment Building Area 2 El. 135'-3" – 166'-0" Class 1E Conduits, Revision 11
APP-1152-ER-102, Conduit Layout Containment Building Area 2 El. 166'-0" – 176'-9" Class 1E Conduits, Revision 11

Condition Reports
CR 50112945 – Conduits 1152-ER-BXC01, BXC02 & BXC03 not per design FE Identified
CR 50114731 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50114761 – Bechtel QCE identified Nonconforming Conditions - Unit 3, Containment, RM.11603, Area 2
CR 50146209 – NRC identified broken flex conduit in Unit 3 Room 11603

**Section** 1A09
ITAAC Documents
SV3-1200-ITR-AUXNRDIR, ITAAC Technical Report Unit 3 Cables and Raceway Report for the Non-Radiologically Controlled Area of the Auxiliary Building, Revision 0

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CR 50146212, NRC Identified Roxtec Gland nonconformance in Unit 3 Room 12305
CR 50144418, NRC-Identified cables not properly secured in Roxtec glands in Unit 3 Room 12304
CR 50148476, NRC Identified - Editorial error in SV3-1200-ITR-AUXNRDIR
CR 50148760, NRC Identified: Inspection Review of ITAAC PCD SV3-1200-ITR-AUXNRD

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APP-JE53-JOM-001, AP1000 Class 1E Resistance Temperature Detector N9002 Technical Manual, Revision 3

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ITAAC Technical Report SV3-CSR-ITR-800807; Unit 3 Cable Separation Report for Analysis: ITAAC 3.3.00.07d.iv.b (NRC Index #807), Revision 2
E&DCR No. APP-G1-GEF-850217; Leaky coax Cable IEEE 384 Separation Reduction (ESR 50144956), Revision 0
ND-22-0473; SNC letter for Resubmittal of ITAAC Closure Notification on Completion of ITAAC 3.3.00.07d.iv.b [Index Number 807], Dated July 15, 2022

**Section** 1A11
2.2.01.11a.i-U4-EQRR-PCD001, "Containment System (CNS) EQ Reconciliation Report (EQRR)," Revision 0
ND-18-1100, “Southern Nuclear Operating Company Resubmittal Notice of Uncompleted ITAAC 225 days Prior to Initial Fuel Load Item 2.2.01.11a.i (Index Number 114),” Revision 0
SV4-PV11-VBR-005, WEC Document No. APP-PV11-VBR-005, “Equipment Qualification Summary for Motor-Operated TRICENTRIC Butterfly Valve for Use in the AP1000 Plant,” Revision 2
SV4-PV11-VBR-006, WEC Document No. APP-PV11-VBR-006, “Equipment Qualification Data Package for Motor-Operated TRICENTRIC Butterfly Valve for Use in the AP1000 Plant,” Revision 3
SV4-PV11-Z0-001, WEC Document No. APP-PV11-Z0-001, “Design Specification for Butterfly Valves, ASME Boiler and Pressure Vessel Code Section III, Class 2 and 3,” Revision 3
SV4-PV11-Z0D-123, WEC Document No. APP-PV11-Z0D-123, “PV11 Datasheet 123,” Revision 7
SV4-PV11-Z0D-124, WEC Document No. APP-PV11-Z0D-124, “PV11 Datasheet 124,” Revision 5
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APP-PV11-GEF-850000, “Update to APP-PV11-VBR-005,” Revision 0
SV4-PV11-V2-123001, “Motor Operated Butterfly Valve 6” Class 150 SST,” Revision 1
SV4-PV11-V2-123002, “Motor Operated Butterfly Valve 6” Class 150 SST,” Revision 1
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SV4-PV11-V2-124002, “Motor Operated Butterfly Valve 10” Class 150 CS,” Revision 2

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SV4-PXS-ITR-800182, "Unit 4: ITAAC 182 Walkdown 2.2.03.08c.iii NRC Index Number 182," Revision 0
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SV4-PXS-M6K-800182, "RCS Cold Leg to the High Point of the CMT 'A' Inlet Line," Revision 1
SV4-PXS-M6K-801182, "RCS Cold Leg to the High Point of the CMT 'B' Inlet Line," Revision 1
SV4-PXS-M6K-802182, "RCS Hot Leg to the High Point of the PRHR HX Inlet Line," Revision 1
SV4-PXS-PLW-050, “Passive Core Cooling System Containment Building Room 11400/ 11302 Cold Leg to CMT 02A Inlet,” Revision 4
SV4-PXS-PLW-05A, “Passive Core Cooling System Containment Building Room 11400 Cold Leg to CMT 02A INLET,” Revision 2
SV4-RCS-PLW-061, “Reactor Coolant System Containment Bldg Room 11302/ 11400 RCS Line from Cold Leg to CMT 02B,” Revision 4
SV4-PXS-PLW-060, “Passive Core Cooling System Containment Bldg Room 11400 PXS Line from Cold Leg to CMT 02B,” Revision 3
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SV4-RCS-PLW-03C, “Reactor Coolant System Containment Building Room 11401 PRHR Supply Line,” Revision 2
SV4-RCS-PLW-032, “Reactor Coolant System Containment Building Rooms 11303/ 11401 PRHR Supply Line,” Revision 3
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SV4-RCS-PLW-034, “Reactor Coolant System Containment Building Rooms 11303/ 11500 PRHR Supply Line,” Revision 2
SV4-PXS-PLW-035, “Passive Core Cooling System Containment Building Room 11500 PRHR Supply Line,” Revision 2

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SV4-PXS-FSK-900191, "ITAAC Verification Volume of the IRWST," Revision 0
SV4-1000-P2-935, "Nuclear Island General Arrangement Section W1-W1," Revision 1
SV4-1030-P2-001, "Nuclear Island General Arrangement Plan at EL 100'-0" & 107'-2"," Revision 4
SV4-MW01-FSK-891550, "Unit 4 ADS Sparger As-Built Elevation Verification," Revision 0
U43-CV-IRWST-SWR1137276, "Unit 4 IRWST ITAAC Volume," 10/29/2019
APP-PXS-M3C-081, "In-Containment Refueling Water Storage Tank (IRWST) Surface Area and Volume Height," Revision 0

**Section** 1A14
ITAAC Documents
SV4-DAS-ITR-800519, ITAAC Technical Report Unit 4 Inspection Results of Diverse Actuation System (DAS) Design Process: Installation Phase: ITAAC 2.5.01.04 NRC Index Number: 519, Revision Number 0

Work Packages
SV4-DAS-JDW-1107744, U4 – AUX – Install DAS Cabinets (SV4-DAS-JD-001/002/003) – EL 135’3” – Rm 12554 – Area 4, Revision 0

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26139-000-4MP-T81C-N3301, Electrical Equipment Installation, Revision 9
APP-GW-GLR-623, AP1000 Design Certification ITAAC 2.5.01.04: Diverse Actuation System Design Process Technical Report, Revision 0
B-GEN-ITPCI-002, Diverse Actuation System (DAS) Cabinets, Version 3.0
SV4-GW-GCW-0126, AP1000 Vogtle Unit 4 Diverse Actuation System (DAS) ASU PC Update and Application Ver 1.11 Installation, Revision 0

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ITAAC Documents
SV4-CSR-ITR-800812, ITAAC Technical Report Unit 4 Cable Separation Report for PMS As-Built Class 1E Routing and Separation, Revision 0

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APP-1221-ER-101, Auxiliary Building Area 1 Class 1E Conduit Arrangement Plan at Elevation 82’-6”, Revision 17
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Cable Pull Tickets
SV4-PMS-EW-JDBCCA0101BZA[PT] Revision 2, dated: 2021-06-03
SV4-PMS-EW-JDBCCA0101CZA[PT] Revision 2, dated: 2021-06-03
SV4-PMS-EW-JDBCCA0201BZA[PT] Revision 2, dated: 2021-06-03
SV4-PMS-EW-JDBCCA0201CZA[PT] Revision 2, dated: 2021-06-03
SV4-PMS-EW-JDBCCB0101BZB[PT] Revision 2, dated: 2021-06-03
SV4-PMS-EW-JDBCCB0101CZB[PT] Revision 2, dated: 2021-06-03
SV4-PMS-EW-JDBCCB0201BZB[PT] Revision 2, dated: 2021-06-03
SV4-PMS-EW-JDBCCB0201CZB[PT] Revision 2, dated: 2021-06-03

**Section** 1P01
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50110999
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Work Environment Assessments
WEA 20210514-10
WEA 202102160005
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Employee Concerns Program Files
ECP IR 20210916-12
ECP IR 20210928-23
ECP IR 202110210001
ECP IR 20220412-18
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ECP 20210315-8
ECP 20200003049
ECP 20200003050
ECP 20200001332
ECP 20210923-12
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ND-AD-002-027, "Nonconforming Items," Version 10.0
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50128528
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50139678
50140006
50144166

Corrective Action Reports
CAR 80004235
CAR 80004262
CAR 80007435

Technical Evaluations
TE 1058167
TE 1058169
TE 1062345
TE 60041454

Miscellaneous
Confirmatory Order EA-18-130 Item 3.a Validation Package, March 18, 2020
Confirmatory Order EA-18-130 Item 3.c Validation Package, July 21, 2020
ECP IR. No. 20220711-27
ECP IR. No. 20220711-28
ND-AD-014-F03, Nuclear Safety Culture - Performance Rating and SLT Report, Version 3.1
S-GE-305, SNC Employee SCWE Course: Maintaining a Good Safety Conscious Work Environment (SCWE) at Southern Nuclear
Utilities Service Alliance Sitewide SCWE Survey Executive Summary, Dated May 18, 2022

Utilities Service Alliance Vogtle 2022 Survey Nuclear Safety Culture Assessment 2022, Dated March 14-23, 2022
SCWE Training Record Spreadsheets.

## LIST OF ACRONYMS

| | |
|---|---|
| ADS | Automatic Depressurization System |
| CAP | Corrective Action Program |
| CCS | Component Cooling Water System |
| CFR | Code of Federal Regulations |
| CMT | Core Makeup Tank |
| CO | Confirmatory Orders |
| COL | Combined License |
| CR | Condition Report |
| DAS | Diverse Actuation System |
| ECP | Employee Concern Program |
| EQRR | Equipment Qualification Reconciliation Report |
| ESR | Engineering Services Request |
| E&DCR | Engineering & Design Coordination Report |
| IEEE | Institute of Electrical and Electronic Engineers |
| IMC | Inspection Manual Chapter |
| IP | Inspection Procedure |
| IR | Inspection Report |
| IRWST | In-Containment Refueling Water Storage Tank |
| ITAAC | Inspections, Tests, Analysis, and Inspection Criteria |
| ITP | Initial Test Program |
| MOV | Motor-Operated Valve |
| NCV | Noncited Violation |
| PCD | Principal Closure Document |
| NRC | Nuclear Regulatory Commission |
| PMS | Protection and Safety Monitoring System |
| RCS | Reactor Coolant System |
| SCWE | Safety Conscious Work Environment |
| SFS | Spent Fuel Pool Cooling System |
| SNC | Southern Nuclear Company |
| SSC | Structure, System, and Component |
| VEGP | Vogtle Electric Generating Plant |
| WEA | Work Environment Assessment |
| WEC | Westinghouse Electric Company |

**ITAAC INSPECTED**

| No. | ITAAC No. | Design Commitment | Inspections, Tests, Analysis | Acceptance Criteria |
|---|---|---|---|---|
| 114 | 2.2.01.11a.i | 11.a) The motor-operated and check valves identified in Table 2.2.1-1 perform an active safety-related function to change position as indicated in the table. | i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of each valve to operate under design conditions. ii) Inspections will be performed for the existence of a report verifying that the as-built motor-operated valves are bounded by the tests or type tests. | i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.1-1 under design conditions. ii) A report exists and concluded that the as-built motor-operated valves are bounded by the tests or type tests. |
| 182 | 2.2.03.08c.iii | 8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events. | iii) Inspections of the routing of the following pipe lines will be conducted: – CMT inlet line, cold leg to high point – PRHR HX inlet line, hot leg to high point | iii) These lines have no downward sloping sections between the connection to the RCS and the high point of the line. |
| 191 | 2.2.03.08c.vi.03 | 8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events. | vi) Inspections of each of the following tanks will be conducted: 3.– IRWST | vi) The calculated volume of each of the following tanks is as follows: 3. IRWST > 73,100 ft3 between the tank outlet connection and the tank overflow |

| No. | ITAAC No. | Design Commitment | Inspections, Tests, Analysis | Acceptance Criteria |
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| 789 | 3.3.00.07aa | 7.a) Class 1E electrical cables, communication cables associated with only one division, and raceways that route the Class 1E electrical cables and the communication cables are identified according to applicable color-coded Class 1E divisions. | Inspections of the as-built Class 1E cables and the as-built raceways that route the Class 1E cables will be conducted. | a) Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables inside containment are identified by the appropriate color code. |
| 790 | 3.3.00.07ab | 7.a) Class 1E electrical cables, communication cables associated with only one division, and raceways that route the Class 1E electrical cables and the communication cables are identified according to applicable color-coded Class 1E divisions. | Inspections of the as-built Class 1E cables and the as-built raceways that route the Class 1E cables will be conducted. | b) Class 1E electrical cables, and communication cables associated with only one division, and the raceways that route these cables in the non-radiologically controlled area of the auxiliary building are identified by the appropriate color code. |

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| 792 | 3.3.00.07ba | 7.b) Class 1E divisional electrical cables and communication cables associated with only one division are routed in their respective divisional raceways. | Inspections of the as-built Class 1E divisional cables and the as-built raceways that route the Class 1E cables will be conducted. | a) Class 1E electrical cables and communication cables inside containment associated with only one division are routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division. |
| 793 | 3.3.00.07bb | 7.b) Class 1E divisional electrical cables and communication cables associated with only one division are routed in their respective divisional raceways. | Inspections of the as-built Class 1E divisional cables and the as-built raceways that route the Class 1E cables will be conducted. | b) Class 1E electrical cables and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division are routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division. |

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| 795 | 3.3.00.07c.i.a | 7.c) Separation is maintained between Class 1E divisions in accordance with the fire areas as identified in Table 3.3-3. | i) Inspections of the as-built Class 1E division electrical cables, as-built communication cables associated with only one division, and the as-built raceways that route the Class 1E divisional electrical cables and communication cables located in the fire areas identified in Table 3.3-3 will be conducted. | i.a) Results of the inspection will confirm that the separation between Class 1E divisions in the non-radiologically controlled area of the auxiliary building is consistent with Table 3.3-3. |
| 800 | 3.3.00.07d.ii.a | 7.d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables. | Inspections of the as-built raceways that route Class 1E cables will be performed to confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: ii.a) Within other plant areas (hazard areas), the minimum separation is defined by one of the following:<br>1) The minimum vertical separation is 5 feet and the minimum horizontal separation is 3 feet. | Results of the inspection will confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: ii.a) Within other plant areas inside containment (hazard areas), the separation meets one of the following: 1) The vertical separation is 5 feet or more and the horizontal separation is 3 feet or more. |

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| | | | 2) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for raceways containing only instrumentation and control and low-voltage power cables ≤2/0 AWG. This minimum vertical separation is 3 inches for the configuration with a conduit above and crossing the open tray at an angle equal to or greater than 45 degrees. 3) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches between a conduit and an open configuration for low- voltage power cables greater than 2/0 AWG but not greater than 750 kcmil. The vertical separation is 3 inches if a conduit is above and crossing an open tray at an angle equal to or greater than 45 degrees. 4) For configurations that involve exclusively limited energy content cables (instrumentation and control), the minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch. 5) For configurations involving an enclosed raceway and an open raceway with low-voltage power cables, the minimum vertical separation is 1 inch if the enclosed raceway is below the open raceway. 6) For configuration involving enclosed raceways, the minimum separation is 1 inch in both horizontal and vertical directions. 7) The minimum vertical separation is 1 inch and the minimum horizontal | 2) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for raceways containing only instrumentation and control and low-voltage power cables ≤2/0 AWG. This minimum vertical separation may be reduced to 3 inches for the configuration with a conduit above and crossing the open tray at an angle equal to or greater than 45 degrees. 3) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches between a conduit and an open configuration for low-voltage power cables greater than 2/0 AWG but not greater than 750 kcmil. The vertical separation may be reduced to 3 inches if a conduit is above and crossing an open tray at an angle equal to or greater than 45 degrees. 4) For configurations that involve exclusively limited energy content cables (instrumentation and control), the minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch. 5) For configurations that involve an enclosed raceway and an open raceway with low-voltage power cables, the minimum vertical separation is 1 inch if the enclosed raceway is |
| | | | separation is 1 inch for configurations with a non-safety conduit and a free air safety cable with low-voltage power cables and below. | below the open raceway. 6) For configurations that involve enclosed raceways, the minimum vertical and horizontal separation is 1 inch. 7) |

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| 801 | 3.3.00.07d.ii.b | 7.d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables. | Inspections of the as-built raceways that route Class 1E cables will be performed to confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: ii.b) Within other plant areas (limited hazard areas), the minimum separation is defined by one of the following: 1) The minimum vertical separation is 5 feet and the minimum horizontal separation is 3 feet. 2) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for raceways containing only instrumentation and control and low-voltage power cables ≤ 2/0 AWG. This minimum vertical separation is 3 inches for the configuration with a conduit above and crossing the open tray at an angle equal to or greater than 45 degrees. 3) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches between a conduit and an open configuration for low- voltage power cables greater than 2/0 AWG but not greater than 750 kcmil. The vertical separation is 3 inches if a conduit is above and crossing an open tray at an angle equal to or greater than 45 degrees. 4) For configurations that | Results of the inspection will confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: ii.b) Within other plant areas inside the non-radiologically controlled area of the auxiliary building (limited hazard areas), the separation meets one of the following: 1) The vertical separation is 5 feet or more and the horizontal separation is 3 feet or more. 2) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for raceways containing only instrumentation and control and low-voltage power cables ≤ 2/0 AWG. This minimum vertical separation may be reduced to 3 inches for the configuration with a conduit above and crossing the open tray at an angle equal to or greater than 45 degrees. 3) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches between a conduit and an open configuration for low- voltage power cables greater than 2/0 AWG but not greater than 750 kcmil. The vertical separation may be reduced to 3 inches if a conduit is above and crossing an open tray at an angle equal to or |
| | | | involve exclusively limited energy content cables (instrumentation and control), the minimum vertical separation is 1 inch and the minimum horizontal separation is 1 | greater than 45 degrees. 4) For configurations that involve exclusively limited energy content cables (instrumentation and control), the minimum vertical separation is 1 |

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| 803 | 3.3.00.07d.iii.a | 7.d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables. | Inspections of the as-built raceways that route Class 1E cables will be performed to confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: iii) Where minimum separation distances are not maintained, the circuits are run in enclosed raceways or barriers are provided. | Results of the inspection will confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: iii.a) Where minimum separation distances are not met inside containment, the circuits are run in enclosed raceways or barriers are provided. |
| 804 | 3.3.00.07d.iii.b | 7.d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables. | Inspections of the as-built raceways that route Class 1E cables will be performed to confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: iii) Where minimum separation distances are not maintained, the circuits are run in enclosed raceways or barriers are provided. | Results of the inspection will confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following: iii.b) Where minimum separation distances are not met inside the non-radiologically controlled area of the auxiliary building, the circuits are run in enclosed raceways or barriers are provided. |
| 807 | 3.3.00.07d.iv.b | 7.d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables. | Inspections of the as-built raceways that route Class 1E cables will be performed to confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route | Results of the inspection will confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class |

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| 812 | 3.3.00.07e | 7.e) Class 1E communication cables which interconnect two divisions are routed and separated such that the Protection and Safety Monitoring System voting logic is not defeated by the loss of any single raceway or fire area. | Inspections of the as-built Class 1E communication cables will be conducted. | Class 1E communication cables which interconnect two divisions are routed and separated such that the Protection and Safety Monitoring System voting logic is not defeated by the loss of any single raceway or fire area. |